

# Claims

- [c1] 1.A method for dynamically adjusting frequency of a central processing unit, comprising:  
providing a translation table, comprising a plurality of layers, each of the layers defining a set of a plurality of front-end bus operation frequencies and a corresponding range of a central processing unit usage rate;  
obtaining a current usage rate of the central processing unit; and  
comparing the current usage rate with entries in the translation table, adjusting one of the front-end frequencies to a corresponding layer, so as to locate the current usage rate in the corresponding range of the central processing unit usage rate.
- [c2] 2.The method for dynamically adjusting central processing unit frequency as recited in claim 1, wherein the translation table is built according to the following steps:  
detecting whether the method is firstly performing on a machine;  
progressively tuning maximum of a clocking range for a processor of the machine; and  
establishing a plurality of layers according to the clock-

ing range, wherein the translation table is defined for the front-end operation frequency of the central processing unit vs. a usage rate.

- [c3] 3.The method for dynamically adjusting central processing unit frequency as recited in claim 2, wherein a frequency down-conversion is performed in the translation table when battery power is supplied, and a frequency up-conversions is performed in the translation table when external power is supplied.
- [c4] 4.The method for dynamically adjusting central processing unit frequency as recited in claim 1, wherein an interval between the layers is one million hertz.
- [c5] 5.The method for dynamically adjusting central processing unit frequency as recited in claim 1, wherein the obtaining the current usage rate is performed by measuring with software.
- [c6] 6.The method for dynamically adjusting central processing unit frequency as recited in claim 1, wherein the obtaining the current usage rate is performed by measuring with operation system.
- [c7] 7.The method for dynamically adjusting central processing unit frequency as recited in claim 1, wherein when comparing the current usage rate and the translation ta-

ble, the layer is raised to an upper layer if the current usage rate is higher than the current layer, so as to up-convert the front-end bus operation frequency.

- [c8] 8. The method for dynamically adjusting central processing unit frequency as recited in claim 1, wherein when comparing the current usage rate and the translation table, the layer is dropped to an lower layer if the current usage rate is lower than the current layer, so as to down-convert the front-end bus operation frequency.